

REMARKS

Claims 1-22 are currently pending in the application. By this amendment, claims 6, 9, 11, 15, 19, and 21 are amended for the Examiner's consideration. The above amendments do not add new matter to the application and are fully supported by the specification. For example, support for the amendments is provided at pages 5, 7, 10, and 11 of the specification. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

35 U.S.C. §101 Rejection

Claims 9-21 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Applicants respectfully amend claim 15 in attempt to further prosecution. This rejection is respectfully traversed with respect to claim 9.

According to MPEP §2106, to properly determine whether a claimed invention complies with the statutory invention requirements of 35 U.S.C. §101, it must first be determined whether the claim falls within at least one of the four enumerated categories of patentable subject matter recited in section 101 (i.e., process, machine, manufacture, or composition of matter).

After determining whether a claim falls within one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. §101 (i.e., process, machine, manufacture, or composition of matter), it then becomes necessary to determine if the claim is directed to nothing more than an abstract idea, natural phenomena, or law of nature, which are not eligible for patent protection. A claim that falls within one of the four enumerated categories and does not cover a 35 USC §101 judicial exception (i.e., an abstract idea, natural phenomenon, or law of nature) is clearly directed to statutory subject matter. However, a claim that does include a judicial exception may still be eligible for patent protection if it either: (A) transforms an article or physical object, or (B) produces a useful, concrete, and tangible result. For example,

the “application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” *Diamond v. Diehr*, 450 U.S. 175, 187, 209 USPQ 1, 8 (1981). Also, subject matter within these exceptions that have a practical use will be patentable.

Claims 9-14

The present invention is directed to a method and system of authentication.

More specifically, independent claim 9 recites, in pertinent part:

- receiving a UserID and a credential string at an authentication proxy server, the credential string is derived from a session ID;
- sending a confirmation request from the authentication proxy to a portal, the confirmation request includes the credential string;
- receiving a response at the authentication proxy for the confirmation request; and
- validating the UserID using a light weight directory access protocol (LDAP) lookup request and the response.

Applicants respectfully submit that the invention recited in claim 9 is directed to a process, and, therefore, falls within one of the four enumerated categories of patentable subject matter recited in section 101. Applicants further submit that the claimed invention comprises a process that produces a useful, concrete, and tangible result, and, therefore, is directed to statutory subject matter. Additionally, Applicants submit that the claimed invention also has a practical use.

In the Office Action, the Examiner asserts that the claimed invention fails to recite statutory subject matter because it is not tangibly embodied on an appropriate computer-readable storage medium. Applicants submit that embodying a method on a computer readable storage medium is not a requirement of patentability. Applicants submit that the claimed invention, regardless of whether on a computer readable medium, produces a useful, concrete, and tangible result for the reasons described herein. As the Examiner appears to reject claim 9 because it does not produce a

“tangible result,” the following rebuttal is limited to this rejection. MPEP §2106 provides the following guidance for the “tangible result” prong of the §101 analysis:

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a 35 U.S.C. 101 judicial exception, in that the process claim must set forth a practical application of that judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”). “[A]n application of a law of nature or mathematical formula to a ... process may well be deserving of patent protection.” *Diehr*, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also *Corning*, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 (“It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . .”). In other words, the opposite meaning of “tangible” is “abstract.”

Claim 9 recites a method for authenticating a user request for a software application. The method includes a number of steps that practically apply the information obtained in the present invention. For example, claim 9 recites “receiving a UserID and a credential string at an authentication proxy server...” This feature takes a UserID and credential string, and uses these features by “receiving” them at an authentication proxy server. Applicants submit this “receipt” is a practical application of the information, and more than mere abstraction.

Applicants further submit that claim 9 produces additional practical applications of the information used in the present invention. For example, claim 9 recites “sending a confirmation request from the authentication proxy to a portal, the confirmation request includes the credential string.” This feature practically applies the credential string by including it in the confirmation request and “sending” it to a portal. After the confirmation is sent, a response is “received” as further recited in claim 9. Applicants submit that the steps of “sending” and “receiving” employ practical applications of information used in the present invention, and are more than mere abstractions.

Hence, the steps set forth in claim 9 produce real-world results, whereby a user is authenticated without having his confidential credentials sent to target applications where the credentials are subject to security breaches. Therefore, Applicants submit that the steps of “receiving” and “sending” responses are more than mere abstract ideas, and the steps produce useful, concrete, and tangible results. As such, the claims are directed to statutory subject matter, and the instant rejection under 35 U.S.C. §101 is improper.

Accordingly, Applicants respectfully request that the rejection over independent claim 9 be withdrawn. Applicants further request that the rejection over claims 10-14 be withdrawn because they depend from claim 9 and include the features of the base claim 9.

Claims 15-21

Claim 15 was rejected under 35 U.S.C. §101. In an attempt to satisfy the Examiner, claim 15 is amended as follows:

A system for authenticating a session stored on a computer readable storage medium, comprising computer readable program code, comprising:

Applicants submit that this language is sufficient to have the system for authenticating a session be tangibly embodied on an appropriate computer-readable storage medium. As such, Applicants respectfully request that the rejection over claim 15 be withdrawn.

Applicants further submit that claims 16-21 depend from claim 15 and include the features of the base claim 15. Accordingly, Applicants respectfully submit that the rejection over claims 16-21 be withdrawn.

35 U.S.C. §102 Rejection

Claims 1-3, 5-6, 8, 15, 19-20, and 22 were rejected under 35 U.S.C. §102(b) for being anticipated by U. S. Patent No. 7,100,054 B2 issued to Wenisch, *et al.* ("WENISCH"). This rejection is respectfully traversed.

According to MPEP §2131,

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

However, Applicants submit that WENISCH does not teach every feature of the rejected claims. For example, Applicants submit that WENISCH does not show the combination of the following features of respective claims 1, 15, and 22.

Claims 1 and 22

Claim 1 recites, in pertinent part:

... creating a credential string which is derived from a session ID...

Claim 22 recites, in pertinent part:

... create a credential string which is derived from a session ID...

The Examiner is of the opinion that WENISCH shows all of the features of independent claims 1 and 22. More specifically, the Examiner is of the opinion that WENISCH shows creating a credential string derived from a session ID. The Examiner supports this argument by equating the claimed "credential string" to the "challenge string" found in WENISCH. Applicants respectfully disagree with the Examiner's analysis and submit that WENISCH does not derive a credential string from a session ID, for example.

WENISCH teaches that the "challenge string" can be either a sequence number or a session identifier or another numerical alphanumeric identifier. (Col. 1, lines 53-

55.) After the challenge string is chosen, a login packet is created. The login packet can contain the challenge string, the username, and the password or other credentials in encrypted form. (Col. 3, lines 42-45.) The login packet can be represented by a hash of the data in these fields, which is then sent to the web server.

WENISCH does not show the step of deriving a credential string from a session ID. For example, in WENISCH, if a session ID is chosen to be the challenge string, and the session ID is "1234" then the challenge string would be "1234." In other words, the challenge string and the session ID become equivalents. The challenge string is not derived from a session ID.

As a further explanation, in one embodiment of the present invention, a credential string may be derived from a session ID by hashing the session ID. Therefore, in the present invention, a session ID of "1234" may be derived to form a credential string of "8362" or "9422a1." Hence, the credential string is derived from the session ID and is not the equivalent of the session ID.

Dependent Claims

Claims 2, 3, 5, 6, and 8 are dependent claims, depending on distinguishable independent claims. For these reasons, Applicants submit that these claims are thus allowable for the reasons of their dependencies on the distinguishable independent claims. Applicants submit that these claims also include subject matter which is distinguishable over WENISCH.

Claims 2 and 5

Claim 2 recites, in pertinent part:

... maintaining a password at a portal and not sending the password to authenticate the UserID.

Claim 5 recites, in pertinent part:

... the sending of a UserID and the credential string avoids at least one of sending a user's password outside of a portal server...

As to claims 2 and 5, the Examiner asserts WENISCH does not send the password outside of the portal server. Applicants respectfully disagree with the Examiner. WENISCH sends a login packet, which includes the password, to the web server which verifies the hash and decrypts the password. (Col. 3, lines 58.) The web server then requests an encryption key from the authentication provider and encrypts the user's password and/or credentials using the encryption key. Next, the web server transmits the encrypted data to the authentication provider. (Col. 4, lines 4-11.) This process is illustrated in Fig. 2, which shows the encrypted password and username 24 being sent from the web server to the authentication provider. Therefore, WENISCH teaches sending the password outside of the web server for authentication. This is contrary to the present invention. Thus WENISCH teaches away from the claimed invention. Therefore, Applicants respectfully submit claims 2 and 5 are not anticipated by WENISCH.

Claim 3

Claim 3 recites, in pertinent part:

... wherein the credential string is an encrypted hash of the session ID.

In rejecting claim 3, the Examiner attempts to equate the credential string in the present invention to the "login packet" in WENISCH. First, this is contrary to the Examiner's prior assertion in independent claim 1 that the credential string is the same as the "challenge string" in WENISCH. Second, the login packet in WENISCH is not an encrypted hash of the session ID. Instead, the login packet contains the challenge string, such as the session ID provided by the server, the username, and the password or other credentials in encrypted form and a hash of the data in these three fields. (Col. 3, lines 42-45.) Therefore, the login packet is an hash of data in all three fields instead

of an encrypted hash of the session ID. Therefore, claim 3 is not anticipated by WENISCH.

Claim 6

Claim 6 recites, in pertinent part:

... checking whether the session ID and the credential string have been previously received within a predetermined time period...

The Examiner asserts that WENISCH checks to see whether the session ID and the credential string have been previously received within a predetermined time period. The Examiner bases this assertion on a security feature in WENISCH wherein a session ID preferably “expires” if the user doesn’t make a page request after a predetermined time interval. (Col. 4, lines 33-35.) For example, in WENISCH, if a user is idle for five minutes, and the predetermined time interval is two minutes, then the users session ID will “expire” or similarly “time out” after the two minutes is over due to lack of use. Contrarily, the predetermined time period in the presently claimed invention does not “time out” or “expire” as described in WENISCH. Instead, the predetermined time period in the presently claimed invention is used to determine if a second request having the same UserID and credential string has been recently received. If a second request is received then procedures associated with a network security breach may be initiated. Therefore, Applicants respectfully submit claim 6 is not anticipated by WENISCH.

Claim 8

Claim 8 depends on distinguishable independent claim 1. Therefore, Applicants submit that claim 8 is allowable for the reasons set forth in distinguishable independent claim 1.

Claim 15

Claim 15 recites, in pertinent part:

... wherein the credential string validation component checks whether the credential string has been previously received for validation within a predetermined time period.

The Examiner asserts that the elements of claim 15 listed above is rejected for similar reasons as claim 6. However, Applicants note that claim 15 is not the same as claim 6. Therefore, Applicants respectfully submit that this rejection is improper form.

Using the passage relied upon by the Examiner in claim 6, Applicants respectfully submit that WENISCH does not check whether the credential string has been previously received for validation within a predetermined time period. As described above, the predetermined time period in WENISCH is a security feature wherein a session ID preferably "expires" if the user does not make a page request after a predetermined time interval. (Col. 4, lines 33-35.) This expiration is similar to a time out feature. Contrarily, the predetermined time period in the present invention does not "time out" or "expire" as described in WENISCH. Therefore, claim 6 is not anticipated by WENISCH.

Dependent Claims

Claims 19 and 20 are dependent claims, depending on distinguishable independent claim 15. For these reasons, Applicants submit that these claims are thus allowable for the reasons of their dependencies on distinguishable independent claim 15. Applicants submit that these claims also include subject matter which is distinguishable over WENISCH.

For example, claim 19 includes distinguishable subject matter for reasons similar to dependent claim 6. Additionally, claim 20 includes distinguishable subject matter for reasons similar to dependent claims 2 and 5.

Accordingly, Applicants respectfully request that the rejection over claims 1-3, 5, 6, 8, 15, 19, 20, and 22 be withdrawn.

35 U.S.C. §103 Rejection

Claims 4, 7, 9-14, 16-18, and 21 were rejected under 35 U.S.C. §103(a) for being unpatentable over U. S. Patent No. 7,100,054 issued to WENISCH in view of U. S. Patent No. 6,374,359 B1 issued to Shrader, *et al.* ("SHRADER"). This rejection is respectfully traversed.

In order to reject a claim under 35 U.S.C. §103(a), the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2142.

When rejecting a claim under 35 U.S.C. §103, the Examiner should set forth in the office action:

- (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and the line number(s) where appropriate,
- (B) the difference or differences in the claim over the applied reference(s),

- (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and
- (D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.

Applicants submit that no proper combination of the applied art teaches or suggests each and every feature of the claimed invention.

Claims 9 and 10

Applicants note that the Examiner did not address all of the features of claim 9, hence, the Examiner did not properly reject claim 9 as being obvious in view of WENISCH and SHRADER under 35 U.S.C. § 103(a). Specifically, the Examiner has grouped together independent claim 9 and dependent claim 10 to make a single rejection under 35 U.S.C. § 103(a). In this rejection, the Examiner makes reference to the features of claim 9 only, without reference to any of the features of claim 10. Also, to support this rejection, the Examiner has referenced the 35 U.S.C. § 102(b) rejection of claim 1. However, the Examiner does not appear to consider the specific features of claim 9 or claim 10, which some of these features are clearly different than that of claim 1. As such, the Examiner has not covered all of the features of claims 9 and 10. This being the case, Applicants submit that a clear issue was not developed between the Examiner and Applicants. Thus, the next Office Action, which should clarify this issue, *cannot* be made final.

According to MPEP 706,

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible and at the same time to deal justly by both the applicant and the public, the invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all the grounds of rejection and objection.

Additionally, MPEP 706.07(a) notes:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). ...

Furthermore, a second or any subsequent action on the merits in any application ... will not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17 (p), of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art.

Accordingly, Applicants respectfully submits that the Examiner may not make the next action final, as in the previous Office Action a "clear issue [was not] developed between the examiner and applicant".

Furthermore, as best can be understood from the Examiner's arguments, WENISCH does not disclose the features in claim 9.

Independent claim 9 recites, in pertinent part:

- ...receiving a UserID and a credential string at an authentication proxy server, the credential string is derived from a session ID;
- sending a confirmation request from the authentication proxy to a portal, the confirmation request includes the credential string;
- receiving a response at the authentication proxy for the confirmation request; and
- validating the UserID using a light weight directory access protocol (LDAP) lookup request and the response.

More specifically, neither WENISCH nor SHRADER disclose a credential string derived from a session ID. As described above, WENISCH does not derive a "challenge string." (See col. 1, lines 53-55.) Instead, WENISCH equates a "challenge string" to a session ID such that the two become the same. For example, if the session ID is "1234" then the challenge string would be "1234." This is contrary to the present invention which includes a credential string that is derived from the session ID and is not the equivalent of the session ID.

While Applicants assert neither WENISCH nor SHRADER disclose a credential string, Applicants do submit, in an attempt to advance prosecution, that SHRADER does disclose a light weight directory access protocol (LDAP) lookup request and the response.

Dependent Claims

Applicants submit that claims 4, 7, 10-14, 16-18, and 21 depend from an allowable base claims. As such, claims 4, 7, 10-14, 16-18, and 21 include the features of the base claims. Accordingly, Applicants respectfully submit that claims 4, 7, 10-14, 16-18, and 21 include allowable subject matter.

Accordingly, Applicants respectfully request that the rejection over claims 4, 7, 10-14, 16-18, and 21 be withdrawn.

Other Matters

Applicants submit that the Examiner did not properly reject claims as noted above. While stating that these claims were rejected, the Examiner never addressed the features of these claims as rejected by the combination of references as applied by the Examiner. For these reasons, Applicants submit that a clear issue was not developed between the Examiner and Applicants. As such, the next Office Action, which should clarify this issue, *cannot* be made final. (See MPEP 706 and 706.07(a), which are referenced above.)

Accordingly, Applicants respectfully submit that the Examiner may not make the next action final, as in the previous Office Action a "clear issue [was not] developed between the examiner and applicant".

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 19-0089.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', with a stylized flourish at the end.

Andrew M. Calderon
Registration No. 38,093

Greenblum & Bernstein, P.L.C.
1950 Roland Clarke Place
Reston, Virginia 20191
Telephone: 703-716-1191
Facsimile: 703-716-1180